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ABSTRACT

In this paper, a model for the instructional design development process is presented, providing the instructor of adults with a set of specific questions in five process steps to be answered in sequence prior to entering the classroom. Each of the five steps, in outline form, includes brief explanatory paragraphs and, in some instances, reference citations. The steps, which vary from two to four pages in length are (1) organizing course related information, processes, and procedures, (2) developing processes for needs assessment and objective formulation, (3) developing the learning experiences and making the instruction plan, (4) analyzing the instructional plan and planning for contingencies in carrying out the learning experience, and (5) planning to conduct evaluation during and after the learning experience. (EM)

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A NEW INSTRUCTIONAL DESIGN DEVELOPMENT PROCESS FOR INSTRUCTORS OF ADULTS

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A NEW INSTRUCTIONAL DESIGN DEVELOPMENT PROCESS FOR INSTRUCTORS OF ADULTS

By Mary Jane Even, Ph.D.

Over the years, instructors of adults have used guides or models for developing instructional designs which originated as program planning models. The models offered by Tyler (1), Knowles (2) and others, have placed the emphasis on planning rather than the development of instructional designs for the classroom. The eight-step process of Houle (3) or the four-step process by Tyler (4) have been offered to instructors as potential guides but are second-hand: all are guides to curriculum or program concerns first then relate to instruction. There have been no explicit guides offered to enable instructors to develop a teaching/learning experience for a group of adult learners which they can use after they are hired. Knowles (5) has suggested techniques and gives some ideas for planning pertinent to adults which are helpful but not complete.

There is a relationship between the program planning process and the instructional design, but they are clearly separate. For an instructor to assume the program planning process can provide him/her with all needed information or that there is little to do prior to walking into the classroom because the program planning process has been carried out may be fatal to instructional effectiveness. Instructors need some guide which speaks to their needs in particular once they have been given their teaching responsibilities. Though these two plans may be considered, by many persons, similar,

the program planning model and the instructional design model are two separate and distinct plans about which an instructor needs to be fully cognizant.

The nature of this problem becomes most apparent when an instructor is hired by a program planner or administrator. Given details of the time, space, and dates, the instructor then needs to prepare for the teaching/learning experience. The instructor may take the word of the planner on needs assessed, the topic, and proceed to plan. Other times the instructor has been told nothing about what the needs are or exactly how to prepare. Today there are many more instances in which an instructor is hired who is not part of the planning team nor privy to planning needs. Some specific detailed plan needs to be provided to enable the instructors to be well prepared to enter the classroom and bring about effective learning experiences. In addition, there is a need for a plan which program planners could use with novice instructors to help prepare them to enter the classroom.

After three years of classroom analysis by at least 200 students and experiential research, an instructional development process is presented here for your consideration. It has been altered through analysis over the years. It has been reported by instructors to enable them to enter the class with confidence and result in classroom effectiveness. The only problems noted presently are that it takes time to prepare and in some areas is redundant. The time is well spent. The redundance has its purpose in that checking different sides of the same aspects or problems enables the instructor to ascertain internal consistency. It is considered at its best as an instructor-training tool.

Since the questions and the format reflect both a specific psychology about the teaching/learning process and theories in support of that philosophy, a brief explanation will be given at the appropriate section. In addition, some source may be given reference.

The educational psychology base of thinking used in this model is the cognitive-field theory whereby group process and interaction, sharing of experience by students, student involvement in planning, and a general gestalt of an instructional design are considered important. A complete interpretation of this learning theory may be found in Learning Theories for Teachers by Morris Bigge, 1976.

This model begins when an instructor is hired to teach a course. It provides the instructor with a set of specific questions in five process steps to be answered in sequence prior to arriving in the classroom. The outcome of the model is a well-structured instructional design whereby decisions are made and concerns are identified for classroom decisions. Thus, the effectiveness of classroom operations will be strengthened.

An Instructional Design Development Process

Introduction to the Instructor

As an instructor, you have been hired by an institution, agency, or organization to fill a need for an education offering deemed appropriate because of the purposes and functions of the institutions, organization, or agency. Most of the time you are told what the topic area is you are hired to teach. Sometimes you develop this topic area depending on your role and function. In either case, once the topic area has been selected, these processes are appropriate.

It is at this point you gather the pertinent data which will assist you to manage the processes of the instructional experiences. The processes outlined here via questions is a guide to this activity. It is intended that you find out the information asked and write it down in paragraphs under each question.

Process I

I. Organizing course related information, processes, and procedures

1.a. What are the educational purposes of the organization (institution or agency) which hired you?

A general description of the educational purposes or functions of the employing organization provides the instructor with the rationale, mission, or purpose of why the educational experience is of value and where it fits in the overall view with other educational efforts.

1.b. What is the philosophy of the organization regarding teaching and instructional procedures?

Ascertain if the organization has made any specific commitment to the style or mode of instruction for students such as individualized instruction or correspondence study, lecture, or discussion. Seek out the general mood of acceptance and how much latitude you have in carrying out the process.

1.c. What is the present information regarding your learners? What sources are available? What can you hypothesize?

Prepare a general statement about the adults you will teach from what the program planner might have told you or you can get from other sources. Ask what other sources are available, see other information such as pre-registration forms and organizations sending adults to class. Add as much data as possible and identify information you will want to ascertain from students in the first class period.

1.d. What relationship does your course, program, or learning experience have with other programs or courses?

Specifically, identify the relationship of this course to any other the students may have been given or taken. Can you make any assumptions regarding what the learner's knowledge of the subject may be because of this relationship? Must you follow some framework in regard to amount covered in class?

1.e. What is the reason you were hired/asked to teach this course, program?

Clearly identify why you were hired to teach the class. Was it your philosophy on teaching, knowledge of the topic, skills, degrees, experience? What kind of performance has been expected of you? At what level are you to perform? Remember you were chosen for a reason and you need to live up to those commitments.

1.f. How are you going to involve learners or legitimizers in planning the learning experiences?

Begin to identify here the manner in which you will find out what the learners are expecting to learn, the level of their experience and knowledge on the topic, the ways they learn best, and generally legitimize what you think you have prepared to teach is correct for the learners you will have in class.

1.g. What are the apparent organizational needs, the community needs, and individual needs for this course?

Due to the fact that most adult learners have experience or work in various sectors of organizations and community which have needs as well as the individual learner having needs, identify here (as Tyler suggests) the related societal implications which can assist you to work with the students. You will want to demonstrate relevance and practicality of the information you provide via community, work, or society problems, however, you will need to be well informed about current events and interests. Here is your chance to seek out those examples from many sources.

1.h. What kind of budget requirements are needed for your course? And how much budget has been allocated to you for your course/program?

Before you begin you will want to identify the specific budget for the course so as to be realistic in planning equipment, xeroxing, materials. Who will pay for the handouts? How many are important? Where do you go and to whom for costs? Check on all procedures for financial arrangements.

1.i. What is the title of the course?

State the title and identify what that title means to prospective learners. Sometimes titles mislead students to courses. You may have dropouts if you do not clearly identify in the title the purpose of the course.

1.j. What kind of time limitations are there on the course?

Ascertain the exact timing of the course, the dates, and the length of each session toward planning realistically that which you wish to accomplish or need to accomplish.

1.k. What relationship does this course have to credit, certification, or other standards?

Ascertain if as a result of this course or this course in combination with others some standard, degree, or certification needs to be obtained. If so, you may be committed to dealing with or need to commit yourself to deal with specific information as well as testing procedures. Ask what it is and the expectations others have for you.

1.l. At what level is the course to be taught?

Generally, ascertain if this is a beginning course, intermediate, or higher level. Decide if this means more knowledge or more depth on the topic. Find out the experience people have in working with the knowledge.

1.m. What methods of instruction do you see a need to include at this time? Relate to purpose of course.

By this time, you have formed some initial impressions regarding your course. In general, based upon the purpose of the course, generally review the methods you believe will be used. It is recognized that later you may be more specific and may alter your views.

1.n. What is a representative bibliography or set of resources you will use?

State clearly here your class texts, materials, and other resources you will be using in the class. At this time you will have considered level of readings, finances, and purposes so you can prepare here a list for the organization to order for you (and students if needed).

1.o. What is your tentative outline for your course?

Along with your resources you will probably wish to give the organization a brief overview of the course for their clarification, approval, and you have the basic information in order to do this now. Prepare a general outline of the topics, what topics will be on the days of class and a general comment about the methods you will use. Don't be too specific yet.

1.p. Other resources available to students?

Before moving on, identify here the places, persons, and other resources available to students in the organization which will facilitate learning, e.g. library, counseling, service, books, etc.

1.q. Particular concerns for your specific clientele?

If you have identified any particular concerns which your students have for learning or instructing, report them here for future consideration. For example, work problems to be handled in class or resolution of some conflict of students.

Process II

2. Developing processes for needs assessment and objective formulation.

This section deals with very specific information requiring knowledge related to objective formulation and levels of learning as identified in Bloom's, Kauthwahl's, and Simpson's taxonomies of educational objectives (6).

2.a. What are the types of learning and levels of learning to be considered in your program?

Generally state the kinds of learning experiences, the types of learning (knowledge, attitude, or skills), and the level or depth of the learning which is expected you will provide in your course. For example, will it be necessary to have the students evaluate criteria to make judgments on some knowledge or just learn about some piece of knowledge? To use tools or just see a demonstration? To know about process or value it?

2.b. What kinds of educational objectives are appropriate for your program? (Specific or general or both--based on your beliefs about how learning takes place)?

Describe how specific your objectives for your class need to be. Will there be tests based upon your objectives? Will the objectives be shared with students? Are they only for your use? The high degree of specificity is needed if used for testing. This will help you determine the amount of work needed. Also ask yourself what kinds of specific objectives are most appropriate to meet your teaching/learning psychology. If very behavioralistic, more specific objectives are a must. If more individualistic, they can be more general. You need to decide.

2.c. What is the appropriate realm of knowledge for your program/course?

Here you clearly analyze the exact nature of the content you will be providing to the students. Clearly identify the framework around which the knowledge you offer is organized.

2.d. How can you specifically narrow the scope of your program/course?

Recognizing that in most all cases instructors offer too much content because of their expertise, identify here how you can narrow the scope of the content without taking out the essentials or making the class too narrow in scope.

2.e. What are the overall and generally appropriate objectives of your program/course?

Cognitive:
Affective:
Psychomotor:

It is believed that in all teaching/learning situations all three levels of learning identified here are incorporated. Thus, here you are asked to prepare the specific objectives you will use in your course based upon the information you prepare in answer to the first four questions in Process II area. You may wish to consult some books at this time to clarify objective writing and your philosophy so as to write objectives consistent with your teaching philosophy.

2.f. What specific products or ends does your program require?

Recognizing you now know what end results your course has, it is time to check your objectives to see if the outcomes will be reached via your objectives. Identify how they are to be reached here.

2.g. What further objectives are needed under each of the areas noted above which are needed to provide a complete picture of your program/course?

Since in No. 2.e. above you were asked to provide only general objectives, you are asked to report here any special objectives or needs not identified above. These may relate to a few people in class or special added needs for the students to consider.

2.h. What kinds of process objectives/goals do you need to help you operate efficiently to attain your goals?

Process objectives are those for the instructor to state what he/she will do to support the student learning objectives. For example, to provide an effective climate for learning for adults. State these here.

2.i. How will you assess the students to see what level of knowledge they are coming into your program/course with? (Will differ by program/course and use may be made of more than one kind.)

There are many ways to fill this need. You are asked here to prepare a statement which describes explicitly the form, situation, or event you will use to test whether your perceptions of student needs, your objectives, and goals are correct. It must be done.

2.j. How will you resolve the difference which may result in objectives for course after assessment?

Recognizing all contingencies, what are some changes you can plan to make if needed following the in-class assessment? Identify potential changes in methods, levels of learning, types of things learned, and others.

Process III

3. Developing the learning experiences and making the instruction plan

This process step calls for knowledge of adult psychology, group process, learning abilities of adults as well as background on how to instruct adults. References have been given in the bibliography.(7)

3.a. What is the relevance, organization, and meaning of the subject matter for the learner?

One goal sought by instructors of adults is to make the learning meaningful, relevant, and to organize the learning based upon the learning styles of the adults in the class. Examine here how you can demonstrate relevance (refer to Process 1g) of subject to the students, how you can get students to relate their own problems to make the subject more meaningful, and how you are going to organize the information to account for different learning styles and modes.

3.b. What are the characteristics of the adult learner we teach? (include motivation, intelligence, readiness to learn)

Examine the potential differences of your students in terms of motivation, age, inteiligence, experience, physical activity, readiness to learn, value orientation (refer to Process 1.c.). It is here because of your knowledge of the psychology of adults you could consider those additional aspects which adults bring to any learning experience. These aspects provide you as the instructor more bases for understanding the classroom process and what is happening to the learners in this process. (There are resources on this information given in the references.)

3.c. How do you as an instructor perceive your role in the classroom? (Your method)

Each instructor brings to the classroom a specific philosophy about people and their abilities. What you do in the classroom will reflect this philosophy even if you have no label for it. Describe here your perceptions of yourself as an instructor and your perceptions of your students as learners. (Refer to Process 1.e.)

3.d. What type of teaching-interaction process will you be using in your program/course?

Describe here the manner in which you will be interacting with your students both in class and out of class. As adults view such interaction as a contribution to the meaningfulness of the class, how will you account for it?

3.e. How is the nature of group process going to be dealt with by the instructor?

It is recognized that a group of people learning develop a particular group attitude. Recognition of the nature of group functioning, group behavior via the life cycle of a group, and such, can be significant part of learning. How will you use it?

3.f. What are the facilities like in which you will be teaching?

Many of the statements you have made thus far imply a certain kind of spatial arrangement of furniture and people. Describe here the manner in which you will arrange the room for learning activities. You may wish draw the picture of the room.

3.g. What are the external influences brought to bear on the T-L experience?

Describe here the influences of administrative, planning, and other policy decisions which need to be accounted for as influences on your teaching. Also describe those problems brought by the learners into your classroom.

3.h. How will you account for learning needs of the adults you teach?

Describe how you will account for learning of adults in these six principles.

1. Learning must be problem-centered
2. Learning must be experience-centered
3. Experience must be meaningful to the learner
4. The learner must be free to look at the experience
5. The goals must be set and the search organized by the learner
6. The learner must have beedback about progress toward goals

Reference: Jack Gibb, in Handbook of Adult Education, (Ed.) Malcolm Knowles, Washington, DC: Adult Education Association, 1960, pp. 56-73

3.i. How will you take into account the "Ten Conditions for Effective Learning" in your course outline?

Describe how you will account for Ralph Tyler's conditions for learning.

1. The student must have experiences that give him an opportunity to practice the kind of behavior implied by the objective.
2. The learning experiences must be such that the student obtains satisfaction from carrying on the kind of behavior implied by the objective.
3. The motivation of the learner, that is, the impelling force for his own active involvement, is an important condition.
4. Another condition is that the learner finds his previous ways of reacting unsatisfactory, so that he is stimulated to try new ways.

5. The learner should have some guidance in trying to carry on the new behavior he is to learn.

6. The learner should have ample and appropriate materials in which to work.

7. The learner should have time to carry on the behavior, to practice it until it has become part of his repertoire.

8. The learner should have opportunity for a good deal of sequential practice; mere repetition is inadequate and quickly becomes ineffective.

9. Another condition is for each learner to set standards for himself that require him to go beyond his performance but standards that are attainable.

10. The tenth condition, related to the ninth, is that to continue learning beyond the time when a teacher is available, the learner must have means of judging his performance to be able to tell him how well he is doing; without these means, his standards are of no utility.

Resource: Ralph W. Tyler, "New Dimensions in Curriculum Development," Phi Delta Kappan, Volume XLVIII, No. 1, September, 1966, p. 27.

3.j. What techniques and devices will you incorporate in your class sessions to demonstrate your methodological views as instructor and support the learnings identified in the objectives?

Throughout this section, you have made decisions about how you will instruct, how your students will learn, and what conditions are important for these to take place. Here you are asked to describe the specific techniques and devices (audio-visual materials) you will use in your class which are consistent with your decisions thus far. In addition, you need to refer back to Process 2 a-j to check if your methods and techniques are consistent with the objectives and goals you have set for the course.

The Instructional Plan

This step asks you to prepare a specific plan which you will use to present instruction to students. Using information you have made decisions upon early in this development, you can prepare the plan. Some persons use this portion as a report to the program planner or administration. If you take out the agenda pages, it can also be used as a syllabus for students.

(1) Description of the Course learning activity:

(2) Purposes or goals of the course:

(3) Instructional objectives for the students:

(4) Clientele (students) to be served (target population, participants):

(5) Prerequisite skills and level at which course will be taught:

(6) Content outline including dates, times, and activities (terms, vocabularly, concepts, facts, etc.):

(7) References or bibliography for the students:

(8) Resources needed by students, by instructor (materials, equipment, people):

(9) Evaluation procedures (during activity; at conclusion of activity): (refer to Process V)

(10) Instructors agenda for each class period using the model shown on a 11 X 8½ inch sheet of paper (sideways), make three columns and place at the head of each column, these three titles:

(a) Time Segments

(b) Activities
techniques
objectives-student
objectives-instructor
content

(c) Resources

Fill in the chart for time the activity during the time showing how it relates to an objective and in the third column place those resources you as an instructor need to use.

Example:

Time Segments Date: Sept. 1	Activities (Techniques, Objectives, Contents)	Resources Needed
7:30-8:00	Instructor: Arrange room, get out materials, set up coffee and name tags. Greet People.	Coffee; name tags; handouts
8:00-8:20	Maintenance: Student objectives: to learn about the content of courses and students	Tables and chair in large U-shape
	Instructor: Provide orientation, description of course content, have each person introduce each other	
Etc.	Technique: Have persons next to each other introduce each other to class--use class syllabi to help explain course--have students be in a circular formation around room at tables	
Account for all time	Etc....Account for all content and objectives	Etc.....account for all resources needed

Process IV

4. Analyzing the instructional plan and planning for contingencies in carrying out the learning experiences.

   This process asks you to re-examine based upon these questions the plan you outlined. Prepare a statement confirming or justifying your decisions. Be willing to change your mind and redo a portion of the plan if necessary.

   4.a. What evidence is there that a climate conducive for adult learning has been considered and will be carried out?

   Explain what you as an instructor will do to meet the needs of adult learners in your classroom.

   4.b. What evidence is there that possible changes in time and agenda items may occur based on student questions and input?

   Explain how you are going to account for time alterations due to fluid discussions or problems which occur. Adults need to have space in an agenda for discussion. What will your posture be in handling this concern?

   4.c. What evidence is there that flexibility in the learning activities are built into each agenda?

   Describe how you can redistribute topics for discussion, expand or retract time segments, have alloted for time to move into small groups and such.

   4.d. Is time used realistically?

   Since adults demand the wise use of time in learning, instructors need to be both realistic with time and yet always aware of learner's need for discussion.

   4.e. Is there time for opening and closing remarks?

   Describe the amount of time provided at beginning and end of class as well as after a break to re-establish the climate.

   4.f. Is there time for movement of members to form groups?

   Describe the amount of time allotted to movement into groups recognizing it takes at least five minutes for groups of two to three to form and ten minutes for five to six member groups to form.

   4.g. Are the resources and activities planned appropriately for the learning objectives? For levels of learning?

   Re-examine the activities you have planned in relation to the learning objectives. Remember if it isn't an objective, don't do it, and if it is you must use it.

4.h. What kind of evidence is demonstrated whereby students share in the maintenance of the class?

Describe how you are going to share the maintenance activities with the class and also the planning and teaching aspects of the class.

4.i. Is there involvement of learners in each session?

Describe how you are going to involve the students at least once if not more each class period in planning teaching and/or discussion. Involvement of students is critical.

4.j. What sort of techniques and devices are used to build motivation and interest?

Describe how you are going to build in ways to boost interest, build morale, heighten motivation.

4.k. Is the facility or site being used to advantage?

Describe the room or site used and the manner in which you are going to use it. Draw a picture of some optional ways of arranging the room for large group discussion, small groups, and other activities. Are there other advantages to the use of the room which you could make use of toward making your teaching/learning experience more effective?

Process V

5. Planning to conduct evaluation during and after the learning experience.

5.a. What are the ways or means you will use to engage in evaluation during the early stages of the course and during the course? (Formative Evaluation)(8)

In the formative evaluation what are the essential or priority concerns to be considered in these processes? Describe how you will account for them during the course:

Rationale for course:
Assessment of learners:
Statement of objectives:
Designing the learning activities (method, techniques, devices)
carrying out the learning activities:
Evaluation of learning activities:

5.b. What are the means and/or tools to be used to evaluate at the summative and/or final stage of the course?(9)

Here you need to refer back to Process 1.k., Process 2.f.i.j. to reaffirm the position you took or were given for the outcomes

of the course. These will guide you in your decision here. Describe your final evaluation or test form recognizing you may need to change it later what the essential or priority concerns (that is behaviors, attitudes, skills, and processes) are to be assessed? In addition, what are the bases upon which the type of evaluation, (extensiveness, specificity, and method of use) will be based?

5.c. What are the types of inputs (influences, processes or resources) which must be taken into consideration in the examining of the results of the evaluation form process?

Recognizing that the input of students is only one of the inputs in an evaluation process, describe those other persons, groups, or influences which need to both have input and be accounted for in the interpretation when evaluation of your course is made.

5.d. What use will be made of the evaluation results? By the instructor? By the institution, agency, or organization?

In order to make certain that kind of information needed is obtained, you need to ascertain the purpose to which the evaluation results will be used. These uses may mean you add questions or seek comments other than course content. Seek this information from the program planner or administration. Describe how you will account for it.

5.e. How is evaluation of instruction perceived by the institution you work for?

Ascertain how your employing group has dealt with evaluation of courses in the past. Establish your commitment to the form and nature of evaluation used for evaluation of your instruction.

5.f. What type of evaluation report (if any) is to be given to the student?

Ascertain the type and form of evaluation report required by the institution for you to give to the students. Are their grades, personal reviews of papers, projects? Are there student conferences? Describe how you can meet these commitments.

5.g. What type of overall report needs to be made to the institution?

Ascertain what kind of closing report you are going to have to present to the employing institution. Will the nature of this report influence any other methods or procedures planned earlier.

5.h. How will <u>you</u> judge <u>your</u> effectiveness as an instructor?

Personally, you will want to make some decisions about your effectiveness as an instructor toward your own growth and development. Several references in the adult education literature (including Axford and Knowles in the bibliography)

give examples of instructor evaluation model. You could select one or develop your own.

Final Comments

A completed report delineating answers, forms, and materials sought in these questions is an instructor's guide with which to begin any learning experience with much confidence. It is a time-consuming process but will provide freedom for the instructor to facilitate learning rather than be caught up in day-to-day organizational concerns. Experience with this set of processes has proven to be most valuable.

Footnotes

(1) Tyler, Ralph, Basic Principles of Curriculum and Instruction, Chicago: University of Chicago, 1971.

(2) Knowles, Malcolm, Modern Practice of Adult Education, New York: Assoc. Press, 1961, pp. 269-301.

(3) Houle, Cyril, The Designs of Education, San Francisco: Jossey-Bass, 1972, p. 47.

(4) Tyler, Op.Cit.

(5) Knowles, Op.Cit.

(6) Bloom, Benjamin (Ed), Taxonomy of Educational Objectives: Cognitive Domain, New York: McKay, 1956.

Krathwahl, David, et.al. Taxonomy of Educational Objectives: Affective Domain, New York: McKay, 1967.

Simpson, Elizabeth, "The Classification of Objectives," Psychomotor Domain, Research Project No. OES-35-104, Urbana, IL: University of Illinois. 1966.
Mager, Robert, Preparing Instructional Objectives, Palo Alto: Fearon Pub., 1962.

Popham, James, The Evaluation Guidebook, Los Angeles, Instructional Objectives Exchange, 1972.

(7) See references listed below.

(8) Anderson, Scarvia B.; Samuel, Bill; and Murphy, Richard T. and Associates, Encyclopedia of Educational Evaluation, San Francisco: Jossey-Bass, 1975.

(9) Ibid. p. 128, 178-179.

References

(These references support completion of Process III)

Stanford, Gene and Albert E. Roark, Human Interaction in Education, Boston: Allyn and Bacon, Inc., 1975.

Bigge, Morris, Learning Theories for Teachers, New York: Harper-Rowe, 1976.

Knox, Allan, Adult Development and Learning, New York: Jossey-Bass, 1976.

Bischof, E., Adult Psychology, New York: Harper Row, 1976, ed.

Tough, Allen, The Adults' Learning Projects, Toronto, Ontario: Institute for Studies in Education, 1973.

Knowles, Malcolm, The Adult Learner: A Neglected Species, Houston, TX: Gulf Pub., 1973.

Axford, Roger, Adult Education: The Open Door, Scranton, PA: International Textbook Co., 1969.

Kelvins, Chester, Methods and Materials in Adult Education, New York: Klevens Pub., 1976.